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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,877	07/06/2001	Palle Schneider	10179.204-US	4404
25908	7590	11/04/2005	EXAMINER	
NOVOZYMES NORTH AMERICA, INC. 500 FIFTH AVENUE SUITE 1600 NEW YORK, NY 10110			SLOBODYANSKY, ELIZABETH	
			ART UNIT	PAPER NUMBER
			1652	

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/869,877	<b>Applicant(s)</b> SCHNEIDER ET AL.	
	<b>Examiner</b> Elizabeth Slobodyansky, PhD	<b>Art Unit</b> 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 46-74 is/are pending in the application.
- 4a) Of the above claim(s) 47-49, 52-67 and 72-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46, 50, 51, 68-71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The amendment filed August 24, 2005 canceling claims 16-34 and 36-45 and adding claims 46-74 has been entered.

Claims 46-74 are pending.

### ***Election/Restrictions***

Newly submitted claims 47-49, 52-67 and 72-74 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 47-49 and 52-67 correspond to non-elected species of Group I and claims 72-74 correspond to the invention of non-elected Group II (Office action mailed May 19, 2004, pages 3-4; Office action mailed February 24, 2005, page 4).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 47-49, 52-67 and 72-74 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 46, 50, 51 and 68-71 are under consideration.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 46, 50, 51 and 68-71 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 46, with dependent claims 50, 51 and 68-71, is drawn to a variant of a *Myceliophthora thermophila* laccase, which variant consists of between 1 and 14 modifications. Applicants indicate support for such limitation by original claim 5 and page 8, lines 5-20, of the specification (Remarks of 8/24/05, page 5). The specification on page 8, lines 5-20, states that "A variant of *Myceliophthora thermophila* laccase, which comprises a mutation in a position corresponding to at least one of the following positions in SEQ ID NO:10" followed by 14 positions. Thus, it provides support for a variant comprising a substitution at any of these 14 positions. The examiner is unable to find adequate support in the specification for limiting the total number of the substitutions comprising any one of the recited positions to 14. Thus there is no indication that variants comprising no more than 14 substitutions in *Myceliophthora thermophila* laccase were within the scope of the invention as conceived by Applicants at the time the application was filed.

Accordingly, Applicants are required to cancel the new matter in the response to this Office Action.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 46, 50, 51 and 68-71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46, with dependent claims 50, 51 and 68-71, recites "between 1 and 14 modifications, wherein at least one of the modifications is a substitution at a position corresponding ...". Because "modification" is not necessarily "substitution", it is unclear whether 14 modifications are substitutions or some other types of modifications. Amending the claim to replace "modifications" with "substitutions" would obviate this rejection.

*No art was found for the elected species of G121.*

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 46 and 68-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Svendsen et al.

Svendsen et al. (WO 98/38286, form PTO-1449 filed July 6, 2001) teach a variant of *Myceliophthora thermophila* laccase with substitution A506E (page 7, line 14; claim 4). They teach a detergent composition comprising thereof (claims 17-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a variant of *Myceliophthora thermophila* laccase with substitutions at position A506 with an amino acid other than Glutamic acid (E) in view of a small total number of naturally occurring amino acids. One of ordinary skill in the art would be motivated by Svendsen et al to produce a variant with different properties. One of ordinary skill in the art would have a reasonable expectation of success because Svendsen et al teach the importance of this position. One of ordinary skill in the art would have a reasonable expectation that at least a substitution with a similar amino acid will result in similar properties.

### ***Response to Arguments***

Applicant's arguments filed August 24, 2005 in response to the Final rejection of August 12, 2003 have been fully considered.

The 112, 1<sup>st</sup> paragraph, written description rejection is withdrawn in view of Applicants' arguments (Remarks, pages 5-6). It is reasonable to expect that different strains of *Myceliophthora thermophila* have highly homologous laccases.

The 112, 1<sup>st</sup> paragraph, enablement rejection is withdrawn in view of the amendment limiting the total number of the substitutions to no more than 14 in a *Myceliophthora thermophila* sequence corresponding to SEQ ID NO:10 (573 amino acids).

The outstanding 112, 2<sup>nd</sup> paragraph, rejection is withdrawn in view of the amendment and Applicants' arguments (page 8).

With regard to the 103(a) rejection, Applicants argue that "Svensen et al. disclose the A506E substitution. Applicants respectfully submit that the new claims render the rejection over Svensen et al. moot" (page 9). While Applicants do not explain their position, the rejection is maintained for the reasons explained above.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Slobodyansky, PhD whose telephone number is 571-272-0941. The examiner can normally be reached on M-F 10:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, PhD can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Elizabeth Slobodyansky, PhD  
Primary Examiner  
Art Unit 1652

October 27, 2005